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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/916,080

07/26/2001

Hechun Chen

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03/09/2005

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EXAMINER

KADING, JOSHUA A

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/916,080

Applicant(s)

CHEN ET AL.

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1, 11, 16, and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11-21-03</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Claim Objections***

Claim 1, 11, 16, and 19 are objected to because of the following informalities:

Claim 1, line 7 states, "specifying protection". This should be changed to --

5 specifying a protection--.

Claim 11, line 7 states, "information that specify". This should be changed to --  
information that specifies--.

Claim 16, line 2 states, "provisioning, processor determines". This should be  
changed to --provisioning, the processor determines--.

10 Claim 19, lines 1-2 state, "wherein processor". This should be changed to --  
wherein the processor--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

15 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that  
form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

20 (e) the invention was described in (1) an application for patent, published under section 122(b), by  
another filed in the United States before the invention by the applicant for patent or (2) a patent  
granted on an application for patent by another filed in the United States before the invention by the  
applicant for patent, except that an international application filed under the treaty defined in section  
351(a) shall have the effects for purposes of this subsection of an application filed in the United States  
only if the international application designated the United States and was published under Article 21(2)  
of such treaty in the English language.

25 Claims 1, 2, 5-9, 11, 12, and 15-19 are rejected under 35 U.S.C. 102(e) as being  
anticipated by U.S. Patent 6,614,754 B1, Usuba et al. (Usuba).

Regarding claims 1 and 11, Usuba discloses a method (claim 1) and a network (claim 11) comprising a processor performing steps similar to those of the method of claim 1. The method "comprising: automatically mapping a topology of network

5 elements of the network based on network connection information, the network connection information describing interconnections of the network elements (figures 8 and 9 as described in col. 4, lines 12-31); verifying that the network elements complete a ring formation (col. 2, lines 11-18 whereby detecting a failure in the ring is the equivalent of verifying a complete ring formation); obtaining protection information  
10 specifying a protection mechanism to be implemented on the network (col. 2, lines 11-18); and automatically provisioning at least one of time-division multiplexing group (TDMG) and facility fault protection (FFP) depending upon the protection mechanism to be implemented on the network (col. 2, lines 11-18 whereby using the time slots in the working and protection channels a time-division multiplexing group is used)."

15  
Regarding claims 2 and 12, Usuba discloses the methods of claims 1 and 11. Usuba further discloses, "wherein the protection mechanism is selected from the group consisting of bi-directional line switched ring (BLSR) protection mechanism, unidirectional path switched ring (UPSR) protection mechanism, 1:1 protection  
20 mechanism and 1+1 linear protection mechanism (col. 1, lines 33-40)."

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Regarding claims 5 and 15, Usuba discloses the methods of claims 1 and 11.

Usuba further discloses, "wherein the protection mechanism is BLSR (col. 1, lines 33-40) and the provisioning comprises TDMG (col. 2, lines 11-18) and FFP provisioning (figure 29 where elements 43 and 44 are different FFP type schemes in that they both have different attributes depending on the failure situation of the network)."

Regarding claims 6 and 16, Usuba discloses the methods of claims 5 and 15.

Usuba further discloses, "wherein the TDMG provisioning includes determining and provisioning a ring map for each network element of the network (col. 4, lines 32-35)."

Regarding claims 7 and 17, Usuba discloses the methods of claims 5 and 15.

Usuba further discloses, "wherein each network element includes at least a primary slot and optionally a secondary slot, wherein the ring map for each network element is determined by traversing the network elements protected by the BLSR protection mechanism from and in the direction of the primary slot (col. 4, lines 26-31 where the CW direction is the primary direction)."

Regarding claims 8 and 18, Usuba discloses the methods of claims 5 and 15.

Usuba further discloses, "wherein the ring map is stored by each network element (col. 4, lines 32-35)."

Regarding claims 9 and 19, Usuba discloses the methods of claims 5 and 15. Usuba further discloses, "wherein the TDMG provisioning includes assigning an identification to each node to facilitate in determining the ring map for each network element (figure 8 and 9 where each node clearly has its own identification)."

5

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15

Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usuba et al. in view of U.S. Patent 6,122,250, Taniguchi.

Regarding claims 3 and 13, Usuba discloses the methods of claims 2 and 12. Usuba further discloses, "the provisioning comprises TDMG provisioning (col. 2, lines 11-18)." However, Usuba lacks what Taniguchi discloses, "wherein the protection mechanism is UPSR (col. 3, lines 46-58)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the UPSR protection mechanism for the purpose of providing a protection path in the network should a failure occur. The motivation for providing a protection path in the network is so that if a failure  
20 does occur (as in Taniguchi, figure 31C), then the communication between nodes can  
25 be maintained (as in Taniguchi, figure 31D).

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usuba et al. in view of U.S. Patent 5,479,608 Richardson.

Regarding claims 4 and 14, Usuba discloses the methods of claims 2 and 12.

5 Usuba further discloses, "wherein the provisioning comprises FFP provisioning (figure 29, elements 43 and 44)." However, Usuba lacks what Richardson discloses, "wherein the protection mechanism is at least one of 1+1 linear protection and 1:1 linear protection (col. 1, lines 56-67)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the 1+1 or 1:1 protection for the purpose of  
10 providing a protection path in the network should a failure occur. The motivation for providing a protection path in the network is so that if a failure does occur, then the communication between nodes can be maintained.

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable  
15 over Usuba et al. in view of U.S. Patent 6,259,837 B1, de Boer et al. (de Boer).

Regarding claims 10 and 20, Usuba discloses the methods of claims 2 and 12. Usuba further discloses, "wherein the protection mechanism is one of BLSR and UPSR (col. 1, lines 33-40) and wherein the provisioning includes TDMG provisioning (col. 2, lines 11-18)."

20 However, Usuba lacks what de Boer discloses, "the TDMG provisioning includes bandwidth provisioning to allow a plurality of bandwidth portions, each bandwidth portion being provisioned with a different protection mechanism (col. 5, lines 4-18


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whereby assigning only the affected bandwidth to the protection mechanism, the remaining bandwidth is free to function normally or if it fails, to take advantage of another provisioning of a different instance of a protection mechanism)." It would have been obvious to one of ordinary skill in the art at the time of invention to include the partial bandwidth provisioning implementing a protection mechanism for the purpose of only addressing the failure on the specified bandwidth. The motivation being that the other portions of the bandwidth not affected by the failure will be left alone.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (571) 272-3070. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joshua Kading



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Examiner  
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March 4, 2005

A handwritten signature in black ink, appearing to read "Be A Phunkulh".

**BOB PHUNKULH**  
**PRIMARY EXAMINER**